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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/362,953	07/28/1999	NISCHAL ABROL	QCPA990384CI	7496

23696 7590 10/06/2004

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
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EXAMINER

NGUYEN, PHUONGCHAU BA

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/362,953

Applicant(s)

ABROL, NISCHAL

Examiner

Phuongchau Ba Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 14-24, 26-29 and 32 is/are rejected.
- 7) ☒ Claim(s) 8-13, 30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7-28-99 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/321,296.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2-1-00.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Claim Objections

1. Applicant is advised that should claim 6 be found allowable, claim 7 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

2. Claim 10 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 13. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

3. Claim 21 is objected to because of the following informalities: claim 21 depending on claim 20 as correspond to claim 2 depending on claim 1. The claim 2 recites predetermined set is two. Claim 21 should changed to claim language to be consistent with others claim sets (i.e., claim 1 set). Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2665

5. Claims 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 is vague and indefinite because claim 21 is not seen where is the third value of the predetermined set of three.

Claims 22 and 24 are rejected in view of their dependencies on claim 21

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Art Unit: 2665

7. Claims 14, 26-29, 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Rezaiifar (6,314,101).

Regarding claim 14:

Rezaiifar (6,314,101) discloses in a wireless communication system, a method of sending a stream of information bytes comprising the steps of:

- a) receiving a negative acknowledgment (NAK) {113, fig.4};
- b) extracting one sequence number bit size from said NAK {col.6, lines 56-57}, said one sequence number bit size belonging to a predetermined set of sequence number bit sizes {col.6, line 66 to col.7, lines 3, 47-52}; and
- c) sending a retransmit frame comprising a sequence number having a number of bits equal to said one sequence number bit size {col.7, lines 1-3, 52-54}.

Regarding claim 26:

Rezaiifar (6,314,101) discloses in a wireless communication system, a method of receiving a stream of information bytes comprising the steps of:

- a) choosing an acknowledgment frame type from a plurality of radio link protocol (RLP) frame types {col.6, lines 46-50}; and
- b) sending an acknowledgment frame (ACK) having said acknowledgment frame type (i.e., NAK){col.6, lines 55-57}.

Art Unit: 2665

Regarding claim 27:

Rezaiifar further discloses wherein said ACK comprises the RLP sequence number value $V(R)$ of the data receiver sending the ACK {col.7, lines 23-25}.

Regarding claim 28:

Rezaiifar further discloses wherein said ACK further comprises the RLP sequence number values $V(N)$ and $V(S)$ of the data receiver sending the ACK {col.7, lines 4-25}.

Regarding claim 29:

Rezaiifar further discloses wherein said step of choosing is based on the receipt of a new-data frame from a data sender, said new-data frame comprising a full-sized RLP sequence number {col.7, lines 1-3, 47-51}.

Regarding claim 32:

Rezaiifar further discloses wherein said step of choosing is based on comparing the number of consecutive previous frames sent by the data receiver not comprising an ACK frame to a predetermined threshold {col.12, lines 5-27}.

Art Unit: 2665

8. Claims 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Drynan (4, 617,657).

Regarding claims 20-24:

Drynan (4, 617,657) discloses in a wireless communication system, a method of sending a stream of information bytes comprising, the steps of choosing one sequence number bit size from a predetermined set of sequence number bit sizes {col.2, lines 66-67; col.3, lines 1-9, 40-45}; and sending a new-data frame comprising a sequence number having a number of bits equal to said one sequence number bit size {col.3, lines 40-45; col.5, lines 61-63}.

Drynan (4,617,657) further discloses wherein the size of said predetermined set is two (**claim 22 or 21**) or three (**claim 21 or 22**) {col.5, lines 40-44, 61-63}; wherein the values in said predetermined set are eight bits and twelve bits (**claim 23**) {col.5, lines 40-44, 61-63; col.3, lines 1-5}; wherein values in said predetermined set are eight bits and fourteen bits (**claim 24**) {col.5, lines 40-44, 61-63; col.3, lines 1-5}; wherein said step of specifying consists of assigning a predetermined value to one bit in said NAK (**claims 6-7, 19**) {col.3, lines 33-45}.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2665

10. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seo (6,581,176) in view of Drynan (4,617,657).

Regarding claims 1-7:

Seo (6,581,176) discloses in a wireless communication system, a method of receiving a stream of information bytes comprising the steps of: choosing is based on sequence number values (12bits; col.5, line 66) received in previous received frames {col.5, lines 63-67}; specifying said one sequence number size (12 bits) to be used in associated retransmissions in forming a negative acknowledgment (NAK) and sending said NAK to a data sender.

Seo does not explicitly disclose choosing one sequence number bit size from a predetermined set of sequence number bit sizes (**claim 1**) wherein the size of said predetermined set is two (**claim 2**) or three (**claim 5**); wherein the values in said predetermined set are eight bits and twelve bits (**claim 3**); wherein values in said predetermined set are eight bits and fourteen bits (**claim 4**); wherein said step of specifying consists of assigning a predetermined value to one bit in said NAK (**claims 6-7**).

However, in the same field of endeavor, Drynan (4,617,657) discloses choosing one sequence number bit size from a predetermined set of sequence number bit sizes (**claim 1**) {col.2, lines 66-67; col.3, lines 1-9, 40-45} , wherein the size of said predetermined set is two (**claim 2**) or three (**claim 5**) {col.5, lines 40-44, 61-63}; wherein the values in said predetermined set are eight bits and twelve bits (**claim 3**) {col.5, lines 40-44, 61-63; col.3, lines 1-5}; wherein values in said predetermined set are eight bits

Art Unit: 2665

and fourteen bits (**claim 4**) {col.5, lines 40-44, 61-63; col.3, lines 1-5}; wherein said step of specifying consists of assigning a predetermined value to one bit in said NAK (**claims 6-7**) {col.3, lines 33-45}. Therefore, it would have been obvious to an artisan to apply Drynan's teaching to Seo's system with the motivation being to adaptively adjust sequence number size used on any particular packet data transmission link.

11. Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar (6,314,101) in view of Drynan (4,617,657).

Regarding claims 15-19:

Rezaiifar does not explicitly disclose wherein the size of said predetermined set is two (**claim 16**) or three (**claim 15**); wherein the values in said predetermined set are eight bits and twelve bits (**claim 17**); wherein values in said predetermined set are eight bits and fourteen bits (**claim 18**); wherein said step of specifying consists of assigning a predetermined value to one bit in said NAK (**claim 19**).

However, in the same field of endeavor, Drynan (4,617,657) discloses wherein the size of said predetermined set is two (**claim 16**) or three (**claim 15**) {col.5, lines 40-44, 61-63}; wherein the values in said predetermined set are eight bits and twelve bits (**claim 17**) {col.5, lines 40-44, 61-63; col.3, lines 1-5}; wherein values in said predetermined set are eight bits and fourteen bits (**claim 18**) {col.5, lines 40-44, 61-63; col.3, lines 1-5}; wherein said step of specifying consists of assigning a predetermined value to one bit in said NAK (**claim 19**) {col.3, lines 33-45}. Therefore, it would have been obvious to an artisan to apply Drynan's teaching to Rezaiifar's system with the

Art Unit: 2665

motivation being to adaptively adjust sequence number size used on any particular packet data transmission link.

Allowable Subject Matter

12. Claims 9-13, 25, 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is 571-272-3148. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 2:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/362,953

Page 10

Art Unit: 2665

PN

Phuongchau Ba Nguyen
Examiner
Art Unit 2665

DUCHO
PRIMARY EXAMINER

Ducho

9-30-04